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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,864	12/28/2001	Paul F.L. Weindorf	10541/502 (V200-0772)	2245
29074	7590	08/24/2004	EXAMINER DIAZ, JOSE R	
VISTEON C/O BRINKS HOFER GILSON & LIONE PO BOX 10395 CHICAGO, IL 60610			ART UNIT 2815	PAPER NUMBER

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/040,864	Applicant(s) WEINDORF ET AL.	
	Examiner José R. Díaz	Art Unit 2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2004.
- 2a) ☒ This action is **FINAL**.      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-51, 53, 54, 56 and 57 is/are pending in the application.
- 4a) Of the above claim(s) 1-42 and 49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 43-48, 51, 54, 56 and 57 is/are rejected.
- 7) ☒ Claim(s) 50 and 53 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 51 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 51 recites the limitation "the polarization scrambling material" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 43-44, 48, 54 and 56 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi et al. (US Pat. No. 4,909,604).

Regarding claim 43, Kobayashi et al. teaches a liquid crystal display device, comprising:

a light emitting diode (4B) (see col. 7, lines 30-31);

a light pipe (4A) (see fig. 1);

Art Unit: 2815

a light extracting surface (4b) located near a first side (bottom) of the light pipe (see fig. 1);

a diffuser (6) located near a second side (Top) of the light pipe (see fig. 1), where the first and second sides are opposite sides of the light pipe (see fig. 1);

a reflective polarizer (3D) (see fig. 1);

a liquid crystal display (3) (see fig. 1);

a first polarization scrambling material (4D) located along the light pipe opposite the liquid crystal display (see fig. 1); and

wherein light from the light emitting diode (4B) enters the light pipe and passes through the diffuser (6), the reflective polarizer (3D), then backlights the liquid crystal display (3) (see fig. 1).

Regarding claims 44 and 56, Kobayashi et al. teaches that the light emitting diode (4B) is located along a perimeter of a circuit board (5A) (see fig. 1 and col. 3, lines 63-66).

Regarding claim 48, Kobayashi et al. teaches that the light emitting diode (4B) has a side reflective orientation with the light pipe (4A) (see fig. 1).

Regarding claim 54, Kobayashi et al. teaches an enhanced specular reflector (4C) disposed near the light emitting diode (4B) and the light pipe (4A) (see fig. 1), where light from the light emitting diode reflects from the enhanced specular reflector into the light pipe (see col. 6, lines 43-45).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 45-47 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. (US Pat. No. 4,909,604) in view of Terao et al. (US Pat. No. 6,342,932 B1).

Regarding claims 45 and 57, Kobayashi et al. teaches a liquid crystal display device, comprising:

a light emitting diode (4B) (see col. 7, lines 30-31);

a light pipe (4A) (see fig. 1);

a light extracting surface (4b) located near a first side (bottom) of the light pipe (see fig. 1);

a diffuser (6) located near a second side (Top) of the light pipe (see fig. 1), where the first and second sides are opposite sides of the light pipe (see fig. 1);

a reflective polarizer (3D) (see fig. 1);

a liquid crystal display (3) (see fig. 1);

a first polarization scrambling material (4D) located along the light pipe opposite the liquid crystal display (see fig. 1); and

wherein light from the light emitting diode (4B) enters the light pipe and passes through the diffuser (6), the reflective polarizer (3D), then backlights the liquid crystal display (3) (see fig. 1).

However, Kobayashi et al. fails to teach a flexible circuit board. Terao et al. teaches that it is well known in the art to include a flexible circuit board (12) (see figs. 2 and 3).

Kobayashi et al. and Terao et al. are analogous art because they are from the same field of endeavor as applicant's invention. At the time of the invention it would have been obvious to a person of ordinary skill in the art to include a flexible circuit board. The motivation for doing so, as is taught by Terao et al., is electrically connecting the printed circuit board and the liquid crystal display (abstract). Therefore, it would have been obvious to combine Terao et al. with Kobayashi et al. to obtain the invention of claims 57.

Regarding claim 46, Terao et al. further teaches a thermally conductive material (30) between the circuit board (20) and a frame (10) (see fig. 3).

Regarding claims 47, Terao et al. further teaches that it is well known in the art to include LEDs (22) having a top reflective orientation with the light pipe (15) (see fig. 3 and col. 4, lines 48-50).

### ***Allowable Subject Matter***

8. Claims 50 and 53 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claim 51 would be allowable if rewritten to overcome the rejection under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to teach, disclose, or suggest, either alone or in combination, a LCD device comprising:

a first polarization scrambling material located along the light pipe opposite the liquid crystal display, and

a second polarization scrambling material between the LED and the light pipe, or an enhanced diffuser reflector near the light pipe.

### ***Response to Arguments***

11. Applicant's arguments with respect to claims 43-48, 51, 54, 56 and 57 have been considered but are moot in view of the new grounds of rejection.

### ***Conclusion***

12. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to José R. Díaz whose telephone number is (571) 272-1727. The examiner can normally be reached on Monday through Thursday.

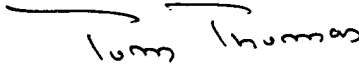
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



Art Unit: 2815

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JRD  
8/19/04



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